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AMERICAN DYESTUFF REPORTER

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ESTABLISHED 1872

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The product known formerly under several names as Diamine Sky Blue FF, Chicago Blue 6B, Benzo Blue 6B, etc. Bright greenish shade of Sky Blue which can be after-treated with Bluestone.

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AMERICAN DYESTUFF REPORTER

A Weekly Publication devoted to

DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

Vol. 4 New York, February 24, 1919 No. 8

CONCERNING CONFIDENCE

The Inevitable Reaction Following the War Has Affected the Dye Industry Along with the Rest —There Is Need of Steadiness and Optimism

THERE is a growing uneasiness among the smaller manufacturers of synthetic dyestuffs in the United States. A vague but plainly apparent nervousness is abroad in the land; fingers are drummed upon desks, nails are bitten to the quick, and cigar-ends chewed to a shapeless pulp by day, while at night countless counterpanes are being picked at and pillows are thumped and turned over to provide cool spots for fevered brows. Frowns follow the slamming of a door, and a nameless irritation grows out of the most trifling annoyances. In short, if one may judge by appearances, the feelings of these gentry may be comprehensively put into words through the phrase of a certain elderly lady in fiction, who was wont to say when startled: "Good gracious; I'm all of a twitter!"

Very expressive, that. But the dye industry—or at least a large portion of it—is not the only one which is in a twitter of apprehension over troubles which do not exist. Its future, of course, is bound up with the future of all our other industries. General business depression affects all, no matter what lines are followed, but the dye industry, being a product of the war, is naturally more directly concerned for its chances now that the war has ceased, and may be pardoned a little more than the average amount of fretting. It is a quite normal reaction to the times, but it should not continue too long or irreparable harm will be done.

The somewhat restrained and polite alarm which at present prevails throughout the ranks of the smaller and medium-sized manufacturers arises wholly from a lack of confidence, and one of the first means by which a lack of business confidence manifests itself is in a general retrenchment all along the line in the matter of expenditures. Pennies are pinched with a nervous tightness which threatens to obliterate the *bas relief* of Mr. Lincoln's features from our copper coins, while it takes a most athletic nickel indeed to escape from the clutches of those who fear dire things. The good old sock is again fashionable as a container for the foot of the profit column, nor are its edges in any immediate danger of becoming frayed from too much contact with horny, toil-worn hands.

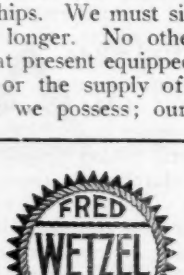
We may as well be perfectly frank with the reader who has followed us this far, and give him fair warning that this little gem of literature is going to concern itself almost exclusively with the subject of advertising. It is dangerous, we know, to talk about such a subject in the text pages of a publication supposedly devoted to higher, nobler things. (*Whisper*): *Accusations of self-seeking have even been known to follow in similar cases!* Yes indeed; they have. Imagine it! Why—the very idea! Well, we *are* seeking for better things, both for ourselves and for others. Heaven only knows how we have the effrontery to make so brazen a confession; but it's true, it's true, and we may as well tell the truth and shame the Devil. Our weak and pitiful excuse is that we are a trade publication catering to the dye industry; if it prospers, we prosper, and if it suffers we must writhe with the rest. Hence, when we think we see something, no matter what, which directly concerns the industry and which might improve general conditions, it is allowable to point it out. Only—the reader musn't say we didn't warn him!

There is absolutely no reason for a lack of confidence in the future of the dye or any other industry in this country. He would have been a rather rash prophet who predicted this in 1914, but we are potentially the foremost dye-producing country of the world. There is going to be plenty of room for all, and plenty of orders—and in the end, plenty of ships. We must simply hold on a little longer. No other foreign country is at present equipped with the machinery or the supply of raw materials that we possess; our chemists take second rank to none, and we have in this country salesmen who could sell gold bricks to a detective and who could most certainly sell dyes to South Americans, Japanese and Chinese against any foreign competition if they had the proper training.

The American business man, collectively, needs no education in the tenet that advertising *does* pay, and that it is one of the greatest forces in modern affairs. But there are a great many of him who cannot seem to leap the gap between that axiom and the equally trustworthy one that it pays just as well in slack times as in flush times. This type does not lack what we call "nerve," but perspective; the appearance of any outside influence which threatens to temporarily disturb the even tenor of his affairs finds him quickly huddling into a ball with sharp-pointed barbs extended in every direction against the world, like a porcupine, and one eye cocked aslant at the cat to see which way that animal is going to jump. This is a favorite trick, and while retrenchment up to a certain point is often wise, nevertheless an over-persistence in it, or the application of it to the wrong expenditures, may precipitate the very catastrophe feared.

The phases of advertising are innumerable, but to illustrate one in particular which is applicable to present conditions, we would recount an incident which actually took place, and which is analogous.

A manufacturer of a product sold both directly and through brokers to other factories where it was used in manufacturing various articles, felt the pinch of hard times and scarce orders. Although he had been an advertiser for years in the publications designed to interest his customers he began a systematic and wholesale elimination of these expenses by cutting short entirely the issue-to-issue orders and refusing to renew contracts as fast as they expired. At length the representative of a monthly magazine ventured into his den one day, armed with a contract blank. He was greeted cor-



dially, given a cigar and invited to take a chair. But when the subject of renewing was broached, a deprecatory hand was waved in the air and the manufacturer shook his head.

"Nope," he remarked; "I'm sorry, Mr. Squirt, but business is dull and we're offa that stuff."

The petitioner's eyebrows went up. "Why," he interposed, "how's this? Hevviwate & Company have been advertising in the *Manufacturers' Only Friend* ever since our first issue. What's the matter with the book, anyway?"

"I know it," responded the other decidedly; "not a thing, not a thing. But Hevviwate & Company is now through—and believe me," he added jovially, "when we're through, we're through and through!"

The visitor surveyed the pattern of the carpet ruefully. "Well, I'd sure like to know the reason, anyway," he said.

Then it came out. The manufacturer had, it seems, been sending circulars to the trade. He had announced a new line and had gotten a satisfactory number of replies. Furthermore, he informed his listener, these replies were all directly traceable to their immediate cause, which was more than could always be said of a full-page advertisement—wasn't it? And so the firm had decided that space in publications didn't pay, and they only wished they had awakened to that fact before. "It's all right in brisk times," the manufacturer concluded, "to spread your name around, but we can get just as good results from circulars and we're going to use 'em hereafter."

The suppliant, who had listened attentively throughout the entire discourse, wore a reflective air at the end of it.

"Very well, Mr. Hevviwate," he said at length, "I see your point. And now I'd like to tell *you* something. You sent out circulars, and got replies. You bet you got replies; but *why* did you? I'll tell you. Those circulars, each and everyone, bore in large letters the name of Hevviwate & Company. When your customers saw it they said 'Hevviwate—oh, sure!' and ordered. You see, they knew all about you—even those who had never dealt with you before—and they had confidence in your status as a reliable house.

"And how," continued the caller, "did you come to be so well known, and so well trusted? Because through good times and dull, year in and year out, they had been used to seeing your name every time they opened their trade papers. Why, my good sir, supposing *I* sent out a lot of circulars to your customers announcing that I could supply them with your product. They'd see the name 'Samuel J. Squirt, Inc.,' at the bottom, and what would it mean to them? Less than nothing—they'd chuck it in the waste-basket. I could go broke sending out literature and I'll gamble every cent I've got in the bank that I wouldn't get enough orders to fill the soul of an I. W. W.! No sir, you owe your present position in the

DOW DYES

Synthetic Indigo
Midland Blue R
Midland Vat Blues

Sold by
Aniline Dyes and Chemicals, Inc.
130 Cedar Street, N. Y. C.

The Dow Chemical Co.
90 West Street, New York
Midland, Michigan

trade in great measure to the fact that you've created confidence by persistently keeping your name before your customers, and they're so used to seeing it, even though they don't always read every word your copy-man writes, that they just naturally believe in you and think of you the minute they need your goods."

It seems almost too much like a fairy-tale or a movie scenario to record that the manufacturer was convinced; but he was, and we can vouch for the facts. He continued plugging away at his advertising, and when times grew better he reaped his reward.

To marshal the arguments necessary to show that the future outlook is bright for the dye industry would take up more space than we have available and more time than the reader has to peruse them. It has all been done, many times before, and he knows it well enough anyway, if he will but conquer his temporary panicky feeling long enough to reflect on the situation. Good times are coming, but they will not come for some unless there is less narrowness of vision displayed. Now is the time to wage more vigorously than ever before a wide-spread campaign to bolster up confidence in the American dye industry. The Du-Ponts and the National Aniline & Chemical Company have set the lead in publicity and propaganda measures; they are not so huge that they are going to grab everything in sight, and the lesser lights may safely follow their example. Indeed, it is along this way that their ultimate salvation lies. Literature must be sent to the newspapers and magazines, the education of the department store people must be continued, liberal use should be made of foreign journals with a view to cultivating a sound and bigger export business, and the domestic trade journals must be used to keep names alive through a passing period of tightness.

We recommend no one to "go broke" trying to tell the world that their colors would make the rainbow hide away for very shame, nor would we urge anyone to jimmy the baby's bank for the wherewithal to purchase space, but we do hold that this is no time to retire into a shell until it seems safe to come out and beg furtively for a few small orders. To every man his own judgment in the matter of how deep to dig—only just so he *does* dig, be it ever so little, to help along a worthy cause.

FRED WETZEL & CO. N.Y.

LEVEL DYEINGS WITH THE MINERAL SALTS

Although iron buff, prussiate blue, and manganese bronze give color which cannot stand, as some of the modern vat dyes do, the full bleaching process, they are nevertheless equal to the latter in respect to fastness to light and, with the exception of the blue, to washing, and have the advantage of greater cheapness. As the colors are "impregnation colors," difficulty is frequently encountered in obtaining level colors, especially in very light shades. It is of interest, therefore, to revive the publicity that was given some seven years ago to a paper on this subject read at the time by Professor Knecht. He observed that the difficulties of producing level dyeings on cotton yarn or pieces may be entirely overcome by the employment of tannic acid as the fixing agent for the iron or manganese, and the subsequent destruction of the tannic acid on the fiber by suitable means. As is well known, cotton shows a natural affinity for tannic acid, which it will take up (under proper conditions) from aqueous solution with absolute uniformity.

Having thus ensured that the fixing agent is uniformly distributed throughout the material, it follows that the metallic salts must also become evenly fixed. Thus, for a delicate shade of

iron buff, cotton yarn may be prepared, *e. g.*, by steeping overnight in a bath containing, say ½ per cent tannic acid. Next day it is wrung evenly and put into a bath of "nitrate of iron" at 1 deg. Tw., which results in the fixation of the iron as ferric tannate. The destruction of the tannic acid and the better fixation of the iron is then effected in another bath containing sodium peroxide. Naturally the buff thus obtained can be dyed prussiate blue by the usual method of steeping in an acidulated solution of yellow prussiate of potash. A simpler method of producing light shades of prussiate blue is, however, available. The yarn is first tanned as before, then rinsed in black liquor, and is now transferred to a bath containing an acidulated solution of red prussiate of potash. This latter, being a powerful oxidizing agent, destroys the tannic acid, becomes reduced itself to yellow prussiate, and this reacts with the iron on the fiber to form the prussiate blue.

If the tannic acid is not completely destroyed, the blue is apt to be dull, similar in shade to indigo. Manganese bronze may be produced on cotton by steeping the unbleached or bleached material in a solution of permanganate of potash; but although it is possible to obtain level shades by this process, tendering is liable to ensue in consequence of the formation of oxycellulose. If, however, the cotton is first prepared by steeping in tannic acid, and the material is then immersed in a solution of permanganate of potash, reduction of the permanganate rapidly ensues at the expense of the tannic acid, with consequent formation of manganese bronze. The shades thus obtained are absolutely level, and are of a more pleasing character than those obtained by the ordinary method of dyeing manganese branze. By treatment in a hot bath of dilute caustic soda they are rendered faster. The buff, blue and bronze shades obtained by the methods described, in addition to being level and clean, do not impart a harsh feel to the fiber, as is the case where the usual methods are employed.—*Textile Colorist.*

There have been rumors recently to the effect that a portion of the plant of the Barksdale Powder Company, located at Ashland, Wis., which during the war was developed into one of the largest producers of TNT in the country, may now be utilized for the manufacture of dyes. The cessation of hostilities has left much of the equipment of this plant idle, and the readiness with which high explosives plants can be converted into synthetic color factories makes this step the logical move.

The census of chemical imports, which has been in the course of preparation for the past ten months by the U. S. Bureau of Foreign and Domestic Commerce, has now been published and will shortly be ready for general distribution. Application should be made to the Bureau or to the Superintendent of Documents, Washington, D. C.

American Aniline Products, Inc.
80 FIFTH AVENUE, NEW YORK
Works: Nyack, N. Y.

Amanil Colors for Cotton
Union Colors for Mixed Goods
Amacid Colors for Dress Goods

FOR MEN'S WEAR:

Amacid Chrome Colors
Alizarine Navy Blue
Alizarine Chrome Red
Alizarine Yellow
Alizarine Brown

Basic Colors

Offices:
Boston, Mass.
Philadelphia, Pa.
Danville, Va.
Chicago, Ill.

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A. P. HOWES, Publisher
LAURANCE T. CLARK, Editor

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Advertising rates on request.

A BAS WORRY!

During the progress of a recent trip which included visits to the offices and works of a number of dyestuff manufacturers of the Middle West, the publisher of the REPORTER was made aware of an increasing diversity of opinion as to the future permanency of the American dye industry. In some cases a rather lugubrious view was taken, while others were more optimistic, but practically everywhere there was uncertainty and conflicting beliefs.

That this should be so is not surprising, for any new undertaking—in which category the dyestuff industry still belongs—must be thoroughly tried out and found worthy before that decidedly "bull" tendency in its sponsors' spirits which is so necessary to its continued success, prevails. In general, the industry at the moment seems to be suffering (though not greatly) from a lack of confidence. The manufacturers have experienced a month or two of poor business, and this is scarcely to be wondered at, considering the extreme abnormality of the times. When the war ceased, consumers immediately looked for a pronounced slump in prices; hopes were entertained that dyes would be available in this country at something approaching pre-war figures—and when the expected decrease failed to materialize, orders fell off. They were again pursuing that foremost of chimeras in human affairs, "something for nothing." When they come to understand that while prices will undoubtedly descend, there will be no overnight changes, nor will dye prices ever drop so low as those which obtained before the war; buying will be accelerated.

This temporary lack of confidence, then, was to be expected; it is perfectly normal, and part and parcel of the throes of reconstruction. It is needless to be alarmed over it, or over the future of the industry in general. Matters simply need a little time for readjustment.

The REPORTER feels strongly inclined to take an optimistic view of the situation. The outlook, if one will but think back three or four years, is far brighter than we should have been justified in expecting in 1914. The strides made by the industry have been enormous, and were made under handicaps which have practically all been removed. It is entirely safe to predict that the progress of the next three years toward increasing the solidity of the industry's foundation, will be greatly in excess of that produced by the last three. Given a chance to continue its development unmolested, and to mature the plans already formed, the industry is certain to amaze the pessimists.

Straws show which way the wind blows, and one has only to observe the signs of the times in order to see clearly that there is a firm foundation for optimism, "idle chatter" though it may seem to some of the croakers and calamity howlers of to-day. As was pointed out in these columns last week, the mere fact that the hard-headed and canny Swiss have decided to cast in their lot with us shows how the future of the industry is regarded by others whose experience in dye-making dates back for generations. The letter of Herman A. Metz reproduced in the REPORTER two weeks ago is also eloquent of the mental attitude of the more knowing builders of the industry. And as for being given a chance to develop unmolested, the ingress of a G. O. P. Congress should be ample grounds for assuming that the necessary protection will be provided.

The successful passage of improved tariff legislation is as good as accomplished, and the creation of a licensing

commission seems sufficiently probable to base strong hopes upon. The industry must work to bring this about, and in the meantime, away with hysteria and panic! They are the foes of successful bnsiness in any industry.

DYESTUFF USES

By Joseph Loebl

Very few cleaners and dyers realize the wide divergency of uses to which artificial dyestuffs are put. In addition to their uses on garments and textile fabrics they are used in a large number of industries for coloring and tinting a large variety of products. Among other things the artificial dyestuffs are used for coloring the following articles: Textiles of all kinds; jute, cocoanut fibre, hats, leathers, paper, straw and straw plaits, lacquer soaps, wax, paraffin, stearin, turpentine, oils, varnishes, glue, gelatine, inks, celluloid, wood, buttons, hair, bristles, foodstuffs, candies, syrups, and many others.

The various applications of the dyestuffs on woolen, cotton and silk and mixed fabrics are more or less well known and no mention of these uses will be made at this time. Rather this article will be devoted to considering the means and methods by which various other articles are dyed. This consideration is not prompted by the belief that garment dyers need this information in their business. Outside of wearing apparel and household furnishings few other articles are received at the cleaning plant for dyeing, nevertheless, it is believed that it will be of interest to dyers to know the means and methods by which dyestuffs are put to use other than in dyeing fabrics.

Jute and Cocoanut Fibre

Considerable quantities of jute are dyed in this country in the course of a year. Quite often it is in the form of burlap to be used for wall covering purposes in place of wall paper. When it is to be used for this purpose the jute is dyed either in a raw, half bleached or bleached condition according to the brightness of the shade desired. Sometimes the jute is only boiled off with soda and at other times it is bleached. The bleaching is generally done with chloride of lime, after first cleaning it in a soda bath, soured with sulphuric acid and rinsed. The dyeing is carried out either in a neutral bath or in a bath charged with from five to ten per cent of alum. When acid colors are being dyed, which, by the way, are used only when light fashionable shades are desired, the dyeing is carried out with the addition of one-half per cent of sulphuric acid, or still better with one per cent of oxalic acid.

All of the basic colors may be dyed on jute in a neutral bath, but from two to three per cent of acetic acid should be added to the bath to retard the absorption of the dye and thus secure more level dyeings. The temperature of the bath should be cold or lukewarm.

Direct colors can be used in the neutral bath. In this event the goods are entered at the boil and dyed from

Frank Hemingway, Inc.
115 Broadway, New York
Dyestuffs Intermediates
PHARMACEUTICALS
HEAVY CHEMICALS
Victoria Blue B
Auramine O
Eosine
Malachite Green Crys.
Direct Fast Pink
Direct Fast Yellow
Bismarck Brown Y & R
DIETHYLANILINE
Factory: Bound Brook, N. J.
Warehouse: 27 Thomes St. N. Y.
Branches:
10 High St., Boston 15 Seething Lane, London

one-half to one hour. But a few of the acid dyestuffs can be used for dyeing jute in an acid bath.

The jute that is received by the garment dyer for dyeing generally is in the form of portieres and curtains. These, as a rule, he is required to dye either green or red, sometimes brown. Generally they are dyed with the substantive colors and then topped off with colors to improve the brightness.

Large quantities of jute are used by manufacturers of trunks and traveling bags, but on account of the very good fastness required cotton goods are preferred. The cotton is dyed either with cutch or with sulphur colors. Cutch is a natural dyestuff. The dyeing is done in combination with metallic oxides to produce shades of remarkable fastness. Bronze is obtained with copper, gray and black with iron and a very fast brown with chromium. The dyeings are shaded with tumeric, fustic or logwood. Until the introduction of the sulphur colors the only fast brown on cotton was obtained with cutch.

One peculiarity of cutch is the hard handle imparted to the goods dyed with it. This harshness is required by trunk makers, and to obtain it when dyeing with sulphur colors the goods must be treated with alum as follows: The goods are dyed in the ordinary manner with sulphur brown or sulphur cutch, turned for a few minutes in a bath charged with from three to five per cent of alum (figured on the weight of the goods), and then dried without rinsing. If the dyeings are after-treated with bichromate of potash and sulphate of copper, the alum is added directly to the bath used for the after-treating. The goods are dried without rinsing.

Leather Dyeing

Obviously it is impossible to give in an article of this length complete information regarding the dyeing of leather and leather goods. As a rule, though, most of the leather is only stained on the hair side, the flesh side being left uncolored. In this case the dye is applied to either the dry or the wet leather with a brush. Two more applications are made, the temperature of the dyestuff being about 120 degrees. If dry leather is being colored the solution is made up in the proportion of eight ounces of the dye to each ten gallons of water. If wet leather is being treated the dyestuff solution must be about twice this strength. Basic dyestuffs are used with the addition of any other ingredients to the dye bath. If necessary, a small amount of acetic acid may be used to correct the hardness of the water. The acid dyestuffs are fixed by adding one part of formic acid to two parts of the dyestuff. No sulphuric acid should be employed.

Buttons

When dyeing buttons the direct colors are used for the production of mode shades, deep reds, green, browns and black. The direct colors offer the advantage of having very good fastness to rubbing. The dyeing is carried out with direct colors by boiling for about an hour with the addition of about one and one-half ounces of soda and from one-half to one pound of Glauber's salt per ten gallons of liquor. The buttons are allowed to cool off somewhat in the bath after they are rinsed.

When the dyeing is being done with basic colors the process is carried out with from three to eight ounces of acetic acid per ten gallons of liquor, boiling until the desired shade is obtained, after which the buttons are rinsed and dried. Dyestuffs especially suitable for dyeing buttons are carried by the different concerns that handle dyestuffs.

Dyeing Straw and Straw Plaiting

The garment dyer should know how to dye straw and straw plait. Straw

hats and straw plait should be soaked for several hours or overnight in boiling water before being dyed. If it is desired to dye pale shades it is necessary to bleach the straw with peroxide. Charge the bleaching bath with from two to three gallons hydrogen peroxide per ten gallons of liquor, heat from 105 to 120 deg. Fahr., neutralize with ammonia until a feeble alkaline reaction sets in, and treat the straw for several hours. When the desired degree of whiteness has been obtained remove the hats from the bleaching bath, rinse, sour off lightly with sulphuric or hydrochloric acid and a small amount of bisulphite.

For mode shades and bright tones on material that dyes easily the basic colors are used. The acid colors are used principally on material that is difficult to dye; while black is dyed with direct colors.

Basic colors are dyed by entering the wetted material while still warm into the luke-warm dye bath, and dyeing with the addition of from two to three per cent of acetic acid at a simmer for thirty minutes, or until sufficient penetration has been obtained, which may be hastened by adding an increased amount of acetic acid.

Acid and direct colors are dyed from 175 to 195 deg. Fahr. for from three to four hours, or in the case of harder plaits for from five to six hours, using concentrated baths that are charged with comparatively large quantities of dyestuff, but without any other ingredient. It is advisable to use soft water. Cotton stitches, when not colored, to the shade of the hat, may be brought up to shade with direct colors dyed cold or luke-warm.

Hats made of artificial silk plait are frequently dyed, after they have been shaped, in pale tones or the mode shades. This sensitive material does not stand a wet treatment and consequently it is dyed with colors soluble in spirit, applied with a brush. A small amount of spirit varnish or shellac is frequently added to the dyestuff solution.—*National Cleaner and Dyer.*

DYE LABORATORY CHEMISTS

By C. M. Whittaker, B.Sc.

The title of this article forms the heading of one of the paragraphs in the article by Dr. L. J. Matos, entitled "Useful Notes on Dyestuffs," which appears in the *Dyer and Calico Printer* of November 1. Having had charge of a dye laboratory since 1901, I naturally read this paragraph with interest but ended by being in complete disagreement with the statements therein. I will take some of these statements in detail.

Dr. Matos says, "Dye laboratory chemists are usually boys or young men who entertain the idea that they are chemists but whose preliminary education, combined with lack of chemical training, enables them to discharge the duties only of a dyer on a miniature scale, and consequently they become standardizers or simply shade matchers." The ideas of Dr. Matos on dyeing must be extremely elementary if he thinkks a man with a

Butterworth-Judson Corporation

61 Broadway, New York

Boston Office, 419 Shawmut Bank Bldg.

Victoria Blue B
Victoria Blue Base
Crystal Violet 6 B
Paranitraniline

Benzidene Base
Benzidene Sulphate
Dinitro Benzol
Picramic Acid
Benzyl Chloride
Michlers Ketone
Phosgene
Chlorosulphonic Acid
Salicylic Acid Tech.
Phenylalphanapthylamine
Ortho Nitro Phenol
Para Nitro Phenol

Sulphuric Acid
Nitric Acid
Muriatic Acid
Nitre Cake
Salt Cake
Lithopone

poor general education, combined with a lack of chemical training, can adequately discharge the duty of a standardizer or shade matcher. I state most emphatically, no man without a knowledge of chemistry can become an intelligent standardizer or shade matcher. Moreover, any firm that relies on such men would be inundated with complaints.

Modern dyeing, as I have shown in detail in my recently published book, is making increasing demands upon the chemical knowledge of the dyer, and therefore of the dye laboratory chemist. I would ask Dr. Matos if a man who has no chemical knowledge is capable of standardizing a vat color, the mere dyeing of which takes four hours on the laboratory scale? Again I say most emphatically "No." If the chemist so employed is not capable of observing if the sample being standardized reduces at the same rate as type; if it forms as good a vat as type; if it oxidizes as quickly as type, or if it stands soaping as well as type, such a man is no good for the standardizing laboratory of a dyestuff manufacturer.

Let us turn to the standardization of sulphur colors—one of the most difficult operations in a dye-standardizing laboratory. I maintain that no man can intelligently standardize or match sulphur colors unless he has a knowledge of the chemistry of what takes place in a sulphur color dyebath. He must be able to observe if the samples being compared dissolve similarly and if the affinity for the fiber is the same, or else he is no good in a color-maker's standardizing or matching laboratory. A man cannot observe the above points intelligently without knowing the reason why it is essential that these points should be watched. Without further elaborating these points I would state that no man is capable of satisfactorily standardizing developing colors, colors which couple with diazotized paranitraniline, colors of the chromotrope class or mordant colors without a knowledge of the chemistry which is involved in the dyeing processes used in standardizing the above classes of colors.

Dr. Matos proceeds to say, "Generally it may be regarded as a mistake for a young man with chemical ambition to lose himself in a standardizing or shade-matching laboratory of a dyestuff house." In other words, a dye laboratory is graded as a chemical blind alley. My experience of eighteen years in a laboratory enables me to state most emphatically that it is the reverse of a blind alley. I have found myself in a continual state of losing men to take up important positions in the two very branches of the trade which Dr. Matos says dye laboratory chemists are incapable of filling with success, viz.: commercial representatives and technical travelers. Men who have passed through my laboratory have taken up positions in Canada, Australia, New York, Japan, Germany, Spain, apart

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from Great Britain itself. Such men are capable of going into dyehouses and tackling practical difficulties with more assurance than many, because of the wide range of fabrics and color which they have handled in the dye laboratory of a color manufacturer.

No better place could be imagined for getting a wide experience of dyeing difficulties and dyeing novelties than the dye laboratory of a color manufacturer except the central laboratories of large textile dyeing combines. One of the reasons for establishing a dyehouse in a color works is to meet the difficulties found in practice in applying the particular firm's products; since these difficulties naturally repeat themselves in different dyehouses, an intelligent dye laboratory chemist soon gets to know by instinct what is the cause of the trouble, and is therefore abundantly qualified for the very work which Dr. Matos says he is not qualified to undertake.

Personally I will not engage a boy in my laboratory unless he is willing to attend the technical school and to go through the regulation courses in inorganic and organic chemistry, dyeing and coal-tar color manufacture. This is with the deliberate object of preventing the boy drifting into a blind alley; any boy who shows no aptitude for the training is told so and advised to get into some other line.

Dr. Matos later states that "It is manifestly impossible for a man who is a wool dyer to be at the same time a skilled cotton dyer or a skilled silk dyer." Really, after a ludicrous statement of this nature one wonders what are the qualifications for Dr. Matos to speak on the subject of dyeing at all. Why, I know master dyers in Great Britain who are skilled in the practical dyeing of pure silk, wool, cotton and artificial silk, and any conceivable combination of these fibers which it is possible to weave. I wonder what the numerous commission dyers in Yorkshire think of the statement that it is manifestly impossible for a man who is a wool dyer to be a skilled cotton dyer at the same time. Thank goodness, they possess sufficient sense of humor simply to laugh at the author of such a statement. Again, what about the managers of the dyehouses of the large garment dyers in Great Britain who have to deal with every conceivable combination of different fibers in their ordinary daily work?

May I finally be allowed to dispose of the fallacy that the standardizing and matching of dyestuffs is a mechanical sort of operation which demands no chemical skill? To be efficiently carried out it requires not only chemical knowledge but highly trained powers of observation. The work is not mechanical but highly in-

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teresting, because in the dye laboratory of a color manufacturer one is in touch with all the latest developments in new dyestuffs, new processes and new fabrics. The intelligent chemist is always coming across new points in dyeing of familiar colors, and soon realizes that the more he knows about dyeing the more there is to learn about dyeing.

In conclusion may I refer to the statement made by Dr. Mator on page 174 in the same article:

"Referring again to the amidonaphthol sulphonic acids I may mention that with the exception of one plant—and that is located in France—no single chemist has been able to successfully carry out every single operation from the conversion of the naphthalene in the first instance to the grinding and sieving of the finished product."

From my own personal knowledge I am able to say that this statement is not correct and there are others in addition to the French chemist, and they, I am pleased to say, are British.

A CORRECTION

A recent trade note in this journal misquoted an announcement of the Takamine Industrial Company, Ltd., New York City, by which it was made to appear that The Takamine Laboratory, Inc., was no longer in existence as such, and we take pleasure in presenting the announcement issued by the former concern to the trade:

"Having in mind the after-the-war trade and anticipating its broader scope we have deemed it advisable to incorporate under the title Takamine Industrial Co., Ltd., the export and import business of Takamine Laboratory, Inc., heretofore conducted at this address (120 Broadway). This new organization, capitalized at $1,500,000, will retain the same personnel as heretofore, with Dr. Jokichi Takamine as president.

"The Takamine Laboratory, Inc., under its old corporate organization, will be continued as manufacturing chemists, with factories at Clifton, N. J., and a New York office at 12 Dutch Street.

"We feel confident that the arrangements now consummated will assure our patrons the highest possible service."

The capital stock of the Takamine Laboratory, Inc., has been increased from $10,000 to $100,000.

NIAGARA BLUE B R

The National Aniline & Chemical Company, Inc., announce a new product of their factories in Niagara Blue B R. It is identical with Diamine Blue B X, which were formerly imported. These prototypes were some of the most widely used brands of Direct Blue, and were put to many special uses. Niagara Blue B R serves both for Navy Blue shades, and in combination with Erie Black for the production of Dark Blues and Blue Blacks. It is a reddish shade of Blue,

A limited number of samples received for analysis, and working formulae furnished for their reproduction.

Confidental advice to chemists, superintendents and assistants, on matters pertaining to the industry.

Dr. Charles B. Davis
Care of American Dyestuff Reporter
470 Fourth Ave., N. Y. City

especially adapted for bright shades as well as for Direct Indigo shades in combination with Black. It is suitable for all classes of cloth work, its penetrating qualities on heavy cotton goods, such as drill and light ducks, being notably good.

The new dye is similar to Niagara 2 B and Niagara 3 B, as to chemical characteristics. It dyes according to the usual methods for Direct colors, but better without soda.

Niagara Blue B R is easily soluble, fairly fast to light and washing, and fast to Acetic Acid. It exhausts fairly well. Its penetrating qualities have already been mentioned, which make it specially good for heavy cotton goods and drills. The coloring for wool is somewhat redder than that for cotton.

INQUIRY DEPARTMENT

All classes of chemical work or advice relating to artificial colors, natural dyestuffs, dyewoods, raw materials, extracts, intermediates, crudes, or dyeing chemicals and accessories in general, will be carried out for readers and subscribers of the AMERICAN DYESTUFF REPORTER by this department.

Inquiries of a minor character will be answered on this page, while major matters involving personal investigation, analyses, perfected processes and working formulas, will, if desired, be treated confidentially through the mails. All questions, materials for analysis or letters leading to the opening of negotiations for special work will receive prompt attention if addressed to Inquiry Department, American Dyestuff Reporter, 470 Fourth Avenue, New York City.

B. C.—Question—We would like to have some information on the production of color from peat.

Answer—The dried and powdered peat is treated with acids; the acid filtrate is then diazotized in conjunction with b-naphthol. Cotton treated with the acid bath renders the fibers more active to dyeing with cochineal.

M. S. D.—Question—How can we carry out the "dry dyeing" process with Patent Blue, and how is the bath prepared?

Answer—One part Patent Blue is dissolved in five parts water, five parts formic acid and two hundred parts cresol. The dyeing takes from five to ten minutes at 50 deg. Cent. Yellow, red, scarlet and black shades are produced in a quite similar manner.

B. M. C.—Question—Our customers complain of the chipping off of the enamel from our dye vats. Can you suggest a remedy for preventing this defect?

Answer—The trouble is with your "ground-coat." If this is not properly prepared, chipping will invariably occur. An excellent working formula for such a purpose is as follows: Flint, 700; borax, 395; red lead, 53; sodium nitrate, 36; clay, 60, and cobalt oxide, 3.5. The melt from this is used in the usual manner.

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NOTES OF THE TRADE

The "victory colors," navy blue and cherry in combination, have been adopted by manufacturers and department stores throughout the country, according to an announcement from the Textile Color Card Association of America.

March 1 to 15 is the time set for the Fourth International Sample Fair at Lyon, France, and, on the recommendation of the U. S. Department of Commerce, the Department of State has allotted the sum of $1,000 to the American consul at that city to be expended on the rental of space for the display of American goods and catalogues.

With a capital of $600,000 the Rhodia Chemical Company has been incorporated under the laws of New Jersey to engage in the manufacture of chemicals and allied products. Headquarters of the company will be located in Jersey City, that State, and the incorporators consist of Walter Haviland, H. A. Bingham and S. J. Nathan.

The Steiner-Lee Dye Works has been incorporated under the laws of Illinois with a capital stock of $10,000. The company will be located in Chicago, and the incorporators are Louis Lee, Isadore Steiner and Sarah E. Bamber.

JENNINGS & COMPANY, Inc.
DYESTUFFS
93 Broad Street Boston

In an announcement just sent out, Mr. Fred Wetzel informs the trade that he has opened offices in room 1207, at 131 East Twenty-third Street, New York City, where he will continue to deal in dyes and chemicals.

"The dyeing departments are having about all they can handle at present," says a Pacific Coast correspondent in the *National Dyer & Cleaner*, who continues: "The high prices for clothing and the poor quality of fabrics have a tendency to cause people to cling to their old clothes. Also, the high quality of work accomplished with domestic dyestuffs is beginning to be appreciated."

Announcing his intention to continue the business along its usual lines, Hugo Koblenzer, president and treasurer of the New Brunswick (N. J.) Chemical Company, purchased the plant of this company when it was recently put up for sale by Alien Property Custodian A. Mitchell Palmer. The price paid was not announced.

With a capital of $25,000, Sanzeri & Kempf, Inc., has been incorporated under the laws of New York to manufacture chemicals and dyestuffs. The plant of the company will be in Brooklyn, and the incorporators are J. and C. Sanzeri and A. Kempf.

Announcement has been made by the Essex Aniline Works, Inc., 85 Leonard Street, New York City, that the Boston office of this concern has been removed from 50 Congress Street to 39 Oliver Street, that city. This is the building formerly occupied by the Cassella Color Company. The Essex Works will maintain at this address a fully equipped laboratory and chemical staff to aid in marketing the products of their plant at South Middleton, Mass., which include a range of sulphur colors for cotton and chrome shades for wool, as well as a full line of direct cotton shades.

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